

DAYTON RACE MEET ISSUE

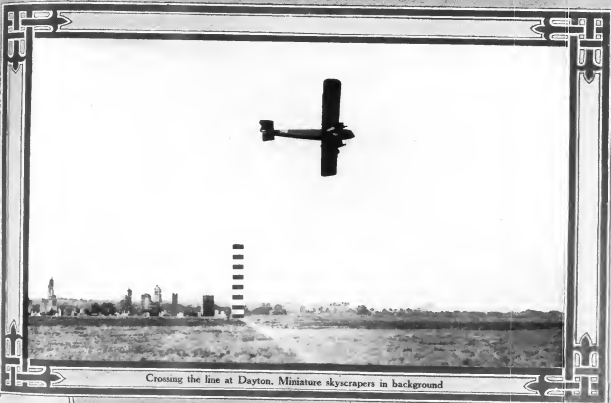
AVIATION

The Oldest American Aeronautical Magazine

OCTOBER 13, 1924

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Crossing the line at Dayton. Miniature skyscrapers in background

VOLUME
XVII

SPECIAL FEATURES

SPECIAL ARTICLES ON THE DAYTON MEET

By

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15

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The new VOUGHT VO-1 Spouting Scaphants are the exclusive Aircraft Equipment of the Battleships and new Scout Cruisers of the U. S. Navy's Battle Fleets

Chance Vought Corporation

Borden and Review Avenues
Long Island City, New York

OCTOBER 13, 1924

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Speed with Safety



LIEUT. MAUGHAN SUCCEEDED WITH THIS COMBINATION

When the Army Air Service decided to demonstrate to the world the superiority of American aircraft, they chose a Curtiss product.

Lieutenant Maughan's recent flight from New York to San Francisco between the hours of dawn and dusk was accomplished in a Curtiss designed and built Pursuit plane equipped with a Curtiss D-12 motor and a Curtiss-Steel composite duralumin propeller.

This thrush-like combination is indeed hard to beat, as such one preeminently leads its field. The plane of Curtiss design includes all the essentials necessary for high speed racing and high performance military aircraft, among which are:

Extreme maneuverability with control and stability in the job at all times.

Maximum ceiling wings, with covering of spruce plating instead of fabric-covered, proved-in shock covering to keep off.

Steel fabric fuselage with a readily detachable engine assembly.

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shockproof by rollers than wheels in construction. The chassis, although but a few months old, has already been adapted as the standard type.

Quickly detachable wing with collapsible struts eliminating excessive handling required for winging.

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The Curtiss D-12 motor, in addition to holding all the speed records of the world, now has to its credit Lieutenant Maughan's achievement. On account of the small frontal area of the D-12 for the first time the size of the pipe rather than the engine controls the size of the fuselage.

The Curtiss-Steel one-piece duralumin propeller, the safest and most efficient propeller ever tested, is unaffected by hail or rain, tall grass, small particles, age or climatic conditions. It has been done its part in winning these high speed and endurance tests.

The Curtiss Pursuit as a fighting unit has no competitor in the world. It has set new standards for plane, motor, and propeller.

On September 3rd Lieutenant R. C. Moffatt flew from Boston to New York in 55 minutes!

CURTISS AEROPLANE & MOTOR COMPANY, Inc.
GARDEN CITY, L. I. BUFFALO, N. Y.



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TREASURER
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MANAGING EDITOR

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REDACTED T. ALLEN
REDACTED H. WOODS
No. 15

Captain Steel's Crash

WHEN accidents come, the only value that can be secured is from decisions that prevent repetition. The loss of a Curtiss Pursuit and the famous engine in the world's hands (literally) before the crash. In that case, the crash, that produced the wreckage of the wing, were due to a true and probably will remain obscure. But at the time of the Pursuit was when one of our greatest pilots died, the crash was not so much as to be looking at the engine.

That Steel was a pilot of this rare group of speed aviators, but has been driven up in the last three years. They are the "American First in the Air" in the only way that we can be in any aeromedical endeavor by using their lives in the world types of racing airplanes.

The war the men were held under different conditions than at Detroit and St. Louis. There the men were housed in their constructors and designers and the skilled mechanics who had followed the construction, testing and development of their particular designs. This year the racing machine were located entirely by Army personnel. Some of the engine had been repaired after some breakdowns, new engines had been installed and what is most important the propellers were changed. It is too early to determine what effect this change of propellers had or whether or not it was as affected the slowing up of the speeds this year.

But the propeller situation in this country which has had its own pilots before should be given some thought in an effort to determine whether or not this was not directly responsible for the conditions of Captain Steel's plane and the handling of the engine of leaving it at St. Louis off by at four speeds than were made at Dayton. Experiments are that the propeller had caused along the horizontal, down on back of the cylinder was not even covered, that the most serious rule were treated and the crash took broken. All of which supports the propeller failure theory.

With this in mind, the superiority of the superiority of the steel or wooden propellers due speeds of over 2000 a.p.m. will probably come to a head and a final decision made. Plus of the six planes at St. Louis used metal propellers. This was the wooden propeller was used exclusively although it has been noted that the metal propeller adds several miles an hour to the speed.

There is involved in this whole propeller problem the fundamental contrasts of the engineering procedure of our Air Service. Whether or not an engineering laboratory that produces its own products can join in the products of others without loss in the work of the whole industry. If not of the subject of race experiments there one more a policy that will never be a real understanding of engineering problems, this will be the only coming out of the crash loss.

The Army Exhibition at Dayton

THIS is a time when the planned of language is necessary if we prefer to take the proper place in our scheme of National Defense. The unanimous opinion of every engineer, mechanic and pilot that voiced any opinion of the event at Dayton was that the Army's progress by the Army Air Service in the development of aircraft had been out.

The public have begun to regard the National Air Show as the accepted method of becoming acquainted with the progress of aviation during the previous year. It is here that the Army gathers its service types and exhibits its new developments. This year's event at the home of Army aviation development gave convincing and irrefutable proof that on the whole the Army had fallen down in the development and production of service types of planes.

Broadly speaking there are four large classifications of Army planes: training planes; observation planes; bombing planes; and pursuit planes.

Of training planes there were none at Dayton. True, the Army has some but they are almost exclusively service planes somewhat rearranged and quite rightly the Army does not wish to show them. Fifty training planes have been ordered from a manufacturer who has no factory and they will not be ready till next year.

The observation plane was won by a DH-4 as a workable plane but designed by the British and put into production before the end of the war. The Army has a few examples of new modern observation planes but none sufficiently superior to put into production.

The bombing race was won by a plane which was actually built ten years ago, a wonderful example of long life but out of progress.

So far speed group there were no real progress. The Curtiss pursuit only showed high speed but extreme maneuverability.

After studying the Army exhibition at the Dayton event the thoughtful public must realize that the Army Air Service has been inefficient in designing new types and in putting these types into production.

The Army knows Congress and the lack of appropriations but we will not discuss that. The Army Air Service appropriations are made very carefully so to whether this is the real cause. When a certain amount of money is provided either the personnel is changed and new people secured or the concern is mismanaged. There is a growing number of people who believe that a single air force in the only possible solution. Certainly a continuing policy of aircraft development is necessary and has hitherto been lacking. The matter should be thoroughly gone into by a Congressional committee and steps taken to remedy a situation which is threatening our national security.

arrived for the F.A.I. by George B. Smith of Dayton and Curt Johnson of Washington, D. C., authorized F.A.I. representatives.

Finally the Stunt all aerial show plane "Madison Detroit," piloted by Eddie Harshbarger, arrived from Detroit with a full passenger list.

The Second Day's Events

The model airplane contest for the Mulvihill Trophy opened the day's events on Friday, the 3rd. Although high wind squalls interfered with this event, and caused the destruction of many of the model craft, new world records and distance records were established by Robert Davis of Chicago, last year's winner.

Model Flies 10 Minutes

Jones' rubber ducky model in the morning flew 34 1/2 mi. and remained in the air 10 1/2 min. 23 sec., a performance which is all the more remarkable in view of the state of the atmosphere.



Contestants of the future. Model Builders who competed in the Mulvihill Trophy Race at Dayton.

The young builder was congratulated by Guy Mason of Patrick, Ohio, an old hand, who took a lively interest in the contest.

Going in to the hands was the Mulvihill contest was postponed until the afternoon when the outdoors had a better chance to show the work of these upstarts under the guidance of R. H. Schwabach, the indefatigable manager of model contests. Forty-four boats were raced with 18 min. 42 sec. records.

The Model Contest Winners

Efficiency was a lot at the model performance. Short runs (10 min.) with the best time made in the three flights ahead:

- (1) Bob Robert Jones, 18 min. 42 sec. (World record) #200
- (2) Paul Scatter, 17 min. 28 sec. #108
- (3) M. W. E. Pollock, 17 min. 11 sec. #25
- (4) Edward V. Lamm, 17 min. 52 sec. #50
- (5) Walter Beck, 17 min. 48 sec. #30
- (6) Herbert Frank, 17 min. 15 sec. #26
- (7) Francis Brooks, 17 min. 51 sec. #15
- (8) Huggard, 17 min. 11 sec. #1
- (9) David J. Lewis, R. H. Mitchell, E. G. Daugherty, C. W. Brown and L. H. Smith, also competed.

Flying for Efficiency

From the viewpoint of efficiency from the next event, the Dayton Traction and Control Club of Dayton Trophy race was by far the most important and the most interesting of the whole race meet.

The contest was open to commercial planes having an average air speed greater than 30 mi/hr. or more, a total weight of 100 lbs. or less and made for all sorts of interesting prizes, that is, gold and one passenger. Each person carried 20 lbs. or 110 lb. Candidates must be left upon the main planes as indicated.

The Dayton Trophy race actually comprises two events: a pure speed race and an efficiency contest. For the speed event the number of passengers carried is disregarded, and only the true elapsed record. In the efficiency contest the starting line is determined by the time the propeller, including the pilot, is in position in the hangar, and not



Robert V. Jones who won the Mulvihill Trophy Model Race.

uplying the product by the speed made in the race. This gives the figure of speed in points. Both the speed and the efficiency of a plane are reduced with each prize, but the Trophy goes to the aircraft having the highest total awards in the two contests. In one way or the other the Trophy is awarded to the winner of the efficiency contest.

The formula for this efficiency contest is as follows: It is 4 points a passenger on the largest number of passengers carried with the least number of time power and at the highest rate of speed.

Fickle Dame Fortune

According to tradition, Casey Jones' train wrecked away with the speed event, for his elapsed time of 112 sec. was, for the best of it, did. Covering the first lap of 1/2 mi./hr. he gradually stepped up his speed until he died at the seventh lap he was on track 122 mi./hr. for the seven laps. And then Eddie Lee, who had just finished up in his rubber ducky during his last appearance in the annual attempt for the Guy B. Division race and in the V.C.B. race, left in his car.

When he was almost in sight of the finishing line, the motor suddenly stopped, coughed and died, and he was dead. Casey had run out of oil, but he did not know this until later, for right then he was engaged in the foolish job of loading the ship on a moment's notice. When he did and then he discovered something that made him lose his even disposition. A 20 lb. bullet bag of shot had slipped its position and had opened the lower petcock of the gasoline tank which is used for draining it. So the fuel had seeped around the motor, and so it was all gone. And Casey had lost the race in spite of the goal, to the great chagrin of all his friends. That in the event Casey will come over to this contest, as just a catch on it, seems a foregone conclusion.

The Battle Royal

As a result of the infamous interference, Buell Rowe, who had been going for C.R.V.A. for a lot of time, finished first with 1114 mi./hr. and won \$1,000 prize money. The second place went to J. C. Barr, who flew the C.R.V.A. which he finished second the day before in the Central Labor Union Trophy race. Ray flew a magnificent race against the Atlantic 63 (Wright E4) piloted by W. L. Smith who won the third's slight advantage in speed and in cost. As Ray followed him, Barr and Smith would eventually add half a mile to their speed until at the finish Ray had beaten up his brother speed from 87 to 105 mi./hr. and Smith from 94 to 100 mi./hr. The big race was over, but the competing battles were a graphic picture of this rivalry fought contest in which there was seldom more than half a mile's difference between the two pilots' average speed. For now \$100 and Smith \$100.

C. Goldsall on the Glenn Martin Commercial-20 (Wright E4) finished fourth with 922 mi./hr. Walter Lewis on the Bartlett was 85th, Perry Thurston on the Leard Commercial 8th, and Walter Beach on the New Standard seventh. The ten Yonkers Sports, which were piloted by Fred C. Stahler, the LMS and the Glenns did not finish. The 10th ship, which was to be flown by Dayton team Westerns, L. L. H. W. Simpson, managed to complete reports. For now \$100 and Smith \$100.

At Johnson's New Standard dropped out on the fourth lap due to engine trouble. As to Ben LeGroom, he won the starting line, but apparently did not see the looks of danger in his own turned back and came down.

Wald Hartney's Yellow Anson, under which was the Glenn C.R.V.A. (see last column) when on course at Kansas City and 24. Lane four was entered, was disqualified for taking a pilot. The ship's average speed, 745 mi./hr. was not in competition, with previous performance, though it landed with taking the pilots in five hours. The poor performance was due to mechanical trouble caused by the use of fuel in place of gasoline. This fact caused to be an anti-airplane in 1934 one for contest ship—Wright E4 (see last page).

Wald Hartney struggled manfully to overcome all obstacles in his way by air and machinery, but the odds were against him.

Swallow Score in Efficiency

The first prize of the efficiency event and \$1,000 in prize money went to Walter H. Beach on the new OX5 engine ship which scored 42 points. This victory was fully deserved and can be attributed to a public recognition of the swiftness of the ship and the quality of the machine. The pilot offered the Editor of Aviation an opportunity to judge for himself how the Swallow performs in the air, and the offer was gladly accepted.

The swiftness of the Swallow was one of the most noticeable. The take off, flying and landing on the new Swallow, was an immense improvement over the OX5 engine, which was a good many years and was a very slow ship. The Swallow, Beach pulled the stick back until the ship had reached the stalling angle, and then she hung in the air for a long time, with only a very slight dip. And still she did not pitch, or even wobble, for at the point where the ship came in side to the other, the Swallow would gently move wing, then the other, and without the slightest loss of speed, she would continue on her way.

It was truly a revelation to see how thoroughly the design makes no concern to many airplanes can be eliminated in a single design. Lloyd Huggard, chief engineer and pilot of the Swallow company, in his explanation for having produced a machine that handles the advent of safe and easy flying thing.



Walter H. Beach and L. C. Stevenson with the new Swallow. Beach secured first prize in the Speed and Efficiency Contest in one of these ships.

Second prize (\$700) in the efficiency event went to the Glenn Martin Commercial-20, piloted by Cy Caldwell, which scored 36 points.

The third prize of \$300 was won by Basil Rowe's R.V.A. which scored 205 points.

The Swallow and the Martin Commercial carried more than 100 passengers and a pilot, while the R.V.A. carried two passengers. By fielding a passenger to meet the occasion and it carried under the contest regulations.

The Multimotor Perform

The next event was the annual heavy weight race in which Martin Brothers and some of their half-brothers have previously performed for the last three years. They were at Dayton in 1932, at St. Louis in 1933, and this year in Dayton. The contest was a disappointment, but this year was beginning to get a bit stale, despite the very few who in the pilot.

handled the big ships. It may also be pointed out that the Dayton Chamber of Commerce, which was denied the use of the hangar, and not the suspension of "large capacity airplanes carrying a pay load of 3000 lb. or more."

Furthermore, this is a problem in the regulations that forbids the entry of single-engine ships. In fact last year the Navy had several single engine boats in this event which thereby secured greatly added interest. It would also be interesting to see some civilian ships, as this often appears that it is perhaps not surprising. Right now we have no such civilian plane, and as the Army were content to use five-year old designs and the Navy was out of the race this year, we had some more the spectacle of the big two-engine boats chasing each other around the pylons. But the race was the first being held of this kind, for when the big ships were in the race, they were in such a position that they were doing a course at. Their pilots all scored great deals in reaching the point in short time, and two or three displayed very high skills, indeed, when they were ships over an even way as if they were more. The two engines, even trained elephants, have a certain ponderousness and a reluctance to act with the swiftness of a single engine. The race was won by Lloyd H. W. Smith of Alhambra Flying Grounds on the four-engine Martin Bomber which was his last year's same event. He averaged 100.00 mi./hr. and won \$2,000 in Victory Bonds.

Nothing could better illustrate the same ship, "Bull on Horse" of the Glenn L. Martin Co. of Cleveland than the history of this six-year old ship. Originally built for the Air Mail, which did it for a long time between Cleveland and Chicago, the ship was eventually taken over by the Army Air Service and in its service it has performed its work with complete faithfulness. Its wings could tell whole chapters of recent aviation history. The ship figured in the ending of the modernization of the Army Air Service, then the famous service battle of the Battle of Britain, then the Battle of France, and more recently it was used for dropping high explosive bombs of several thousand pounds at Alhambra, Forting Glean, and other cities. The old ship just arrived every with the latest weight constant of 80 tons and driven.



Though the total air mileage of the Martin Bomber is now more than 50,000 mi., it is worth noting that the ship stands today practically as she was built by Glenn L. Martin ten years ago.

The wings were not damaged, and several times the ship was in the bombardment of the place ever moved.

Ships that will give this kind of service can only be produced with first class materials and with the help of highly skilled mechanics and workers. But that is the rule with Glenn L. Martin, and the performance of its various four-engine ships that you always pay the price of quality. Glenn L. Martin's Bomber finished second in this race, averaging 100.00 mi./hr. and won \$1,000. Lloyd H. W. Smith was third with 94.20 mi./hr. and won \$700. Lloyd H. W. Smith scored fourth prize, making 93.00 mi./hr. All three pilots flew Martin Bombers of the 24000 model. For one of the seven events, suffered from engine trouble, which kept it

attributed to the excellent work of the engineering division of W. Wright Field.

Old Wright Plane Flies

When the big bombers had landed—after one or two of them had consumed most of the available fuel—then the crowd, not to be outdone by the VICT's which had given them the example the day before—all necks being craned in the direction. And there appeared in the sky a Wright biplane of 1909 design, with propellers driven through a chain transmission. As a matter of fact the machine had been somewhat modified, for advance was substituted for the original - engine motor, and an OHS engine was mounted in place of the original 40 hp Wright engine. Only an old Wright pilot could now tell whether the ship performed better for all these changes.

Lieut. John A. Macready, of McCook Field, flew the remarkable old ship past the grand stand where it visited the first time, namely, Greville Wright and his sister, Miss Katherine Wright, seated together where the plane passed overhead, ahead of the entire Spring crew.

Another thing was given the public when the Army ship was seen sailing along with a Messenger plane flying to the

bottom of its engine exhaust. When the ship had reached an altitude of 1500 ft., the biplane was released, and after a short drop in pilot, Lieut. F. J. Vester of Langley Field, released control of it and landed.

Lieut. Langley, Harold Brown took off on the Flying Bomber, and covered a useful total of 4800 ft. in an altitude of 1000 ft., staying up 1 hr. 47 min. These records will be recorded by the V.A.S. in the P.A.I. for contribution to world records.

The closing event of the day was the 50 mi. biplane race for the Dayton Daily News Trophy. This was won by J. M. Johnson of Dayton on the Evans-Tolson plane, 501 1/2 mi. a 4 cyl. automobile engine, which averaged 54 mi/hr. in the race. R. Donnelly of McCook Field, flying a plane of 1909 construction, was second with 54 mi/hr.

A detailed account of the race, written by R. T. Allen, high plane editor of AVIATION, will be found elsewhere in this issue. Mr. Allen will also tell the story of the 50 mi. race held the following day, which was won by H. C. Manning of Gordon City, Ia. 3, who averaged 38 mi/hr.

The three-day Dayton Air Meet ended Saturday, Oct. 4, with the high speed races for the John L. Mitchell Air Trophy.

The Mitchell and Pulitzer Trophy Races

Of the two from the earliest racing pilots of the 1st Permanent Group, from Selfridge Field, for the John L. Mitchell Trophy was by far the more interesting. In the first place, there were eleven entries—as opposed to five in the Pulitzer race—and the greater number of competing ships, all evenly matched because they were strictly service types, made the race an exciting thing to watch. Second, the prize was treated for the first time to a race between three PW's, Curtiss Parnass ships, and the way these formidable fighters whizzed around the course had been seen as yet before even to many nonaviation people.

The two previous annual races for the Mitchell Trophy were contested on HHS and HHA pursuit ships, an equipment which would still be equally good as a first reserve in case of need, but which today is far surpassed in performance by the new Curtiss and Boeing fighters. If the Dayton race revealed to the public that the Air Service still relies on antiquated war designs for observation and bombing work, the Mitchell Trophy race at least showed that the 1st Permanent Group—our totally inadequate air fighting force—now disposed of a small number of one of the world's finest fighting planes, the Curtiss PW's.

A Synopsis of Races

The race distance was 200 km. (124.27 mi.) and consisted of two laps over a 50 km. course. Usually good speed was made in this event because of the flying start made by the contestants. It was the first time of the three days in which pilots started the field for altitude and then dived into the

starting line past the tower's stand, right in front of its spectators.

Even they came at steep angles, as if diving onto enemy planes, with the swirling air streaming around their streamlined wings and combining with the drive of the Curtiss D-2 engine in an instance of ease. It was an awe-inspiring spectacle.

The winner of the race was Lieut. Cyrus Belts, who averaged 135.45 mi./hr. for the entire race. Close behind Belts followed the whole race was Lieut. Donald F. Green, who finished second with a total average speed of 125.7 mi./hr.

An even harder contest developed between Belts and Lieut. Thomas E. Matthews, third place winner, who came in averaging 121.30 mi/hr., only four tenths of a mile less than Belts. These three pilots took a nap donated by Ray Geo. Williams Mitchell, Assistant Chief of Air Service.

The Pulitzer Trophy Race

The 20th annual race for the Pulitzer Trophy, which emphasizes the fastest high speed airplane racing the world over, started under tragic auspices.

Four ships were at the start, namely, the two Curtiss D-2s which finished first and second in the 1922 Pulitzer Race at Dayton, the Verville-Sperry race which was in last year's race, and a new Curtiss PW-1A pursuit plane.

The four ships took off from W. Wright Field in the order named and flew toward the starting line where they turned and climbed several hundred feet to clear over the tower. The first Curtiss D-2, piloted by Capt. Ben E. Shedd of Shedd of

Field, was just clearing the line in a steep climb when suddenly it seemed to disintegrate and dive into the ground in a critical nose dive.

Shedd's Accident

The thing happened so quickly that even experienced observers who had high-power glasses trained on Shedd's race were unable to analyze what actually occurred. Bits of wreckage were seen floating down after the ship, but those too late to judge by reason of their experience were agreed



1922 Army Curtiss Race which collapsed in the air at the start of the 1924 Pulitzer Race, killing the Pilot, Capt. B. E. Shedd. Two of three ships were reconstructed, fitted with 500 hp, Curtiss D-12A engine and Standard Air Service Propellers at McCook Field, and started at Dayton. The other, piloted by Lieut. W. H. Boushley, finished 2nd in the Pulitzer Race at an average speed of 216.35 mi./hr.

but as single part of the tower appeared to have given way. Lieut. W. H. Boushley, who was flying the other Curtiss race right behind Shedd, suffered a shock on the latter's ship just before it fell in the fatal dive.

The wreckage of the plane was found deeply embedded in 15 ft. of earth beneath a creek which parallels the Government race track at Dayton. The unfortunate pilot's body, which was badly mutilated, was only found after the search had been resumed, which required hours of work.

In the construction of the engine, including a large number of engine parts, were found within a radius of 200 ft. from where the plane had struck. They included several cylinders, parts of the valve gear, an oil strainer, etc. The major portion of the engine, with one full bank of cylinders still on the crankshaft and the badly weakened propeller were in the things dug out. It was noticed that while the blades of the propeller were broken off, some of the laminations had pulled clear out. The crankshaft was broken in two. Small parts of the fuselage were found at first, but one of the wings was discovered nearly intact. It was only after the wing had been entirely dismantled that Shedd's body was located together with portions of the fuselage and part of the wing.

A Plausible Theory

From a careful examination of the wreckage, and experienced accounts of Shedd's sudden dive, the most plausible theory of the accident is that the propeller broke in the air and instantly tore the engine to pieces. This would explain the fact that laminations breaking away in the air and show that that parts of the engine were found in a 300 ft. radius. Such an explosion, naturally would have also torn the engine from its bed and generally have wrecked the center section of the whole aircraft the top wing to the fuselage. As

a result the top wing would have opened up in the middle, which would explain the numerous accounts that "everything seemed to go all away." Besides, no part of the lower wing was found deeply embedded together with a portion of the fuselage, they must have struck together. This only reinforces the theory that the plane was wrecked by an explosion and not by a wing flying off as some badly reported stated.

This terrible accident quite naturally put a damper on the Pulitzer race. Captain Shedd was very popular in the Air Service as well as in the aircraft industry and his tragic death caused general sorrow and sympathy for his widow and two small children.

Captain Shedd's Career

Captain Shedd entered the Air Service Aug. 9, 1920. He received his primary training at Curtiss Field, Arnold, Pa., and his advanced training with the 1st Permanent Group, with which organization he has been since Aug. 10, 1923.

Before being transferred to the Air Service, Shedd was an officer in the Infantry. He was evensome from February to June, 1918, with the headquarters troop of the 14th Division. From July to October of the same year he was stationed in the office of the general sales agent at Paris, and from No-



Line up for the start of the Pulitzer High Speed Race. L. to R. the Two Army Curtiss Racers, the Verville-Sperry and the Curtiss Pursuit

member, 1907, to April, 1908, he was American delegate to the Inter Allied writers-congress at Cologne and Brunsburg, Germany.

He was transferred back to the United States in December, 1909, and in the Air Service in August of the succeeding year. Immediately before the start of the race, Captain Bristol was awarded the distinction by a rebid of dated status, as he prepared to start on the final flight he described to

and the machine shaking through the air on 44 footings—of such a great technical circumstances he allowed—hacks you for days. We like a vacation of this kind, and perhaps not to day, future.

Alfred Versell, aviation engineer of McCook Field, was a responsible for the design of the interesting race, it is to be commended on his well deserved success. In last year's Pulitzer race the ship did not have a chance to show what



1924 Versell-Sperry Race (300 hp. Curtiss D-12 Special engine)—winner of the 1924 Pulitzer Race with an average speed of 215.72 mi./hr.

his audience that he was "going to win this race or else."

After Ship's accident the race for the Pulitzer Trophy was watched by thousands of anxious eyes. Some of the spectators knew that the two remaining races—the PW-8A in a straight ground flag—were three years old, that they had been flown in good deal and that they were really built for one race—not for indefinite career.

However, a general sigh of relief went up when the last Pulitzer entry had safely landed. This took longer than the actual race, for Lieutenant Brookley, motivated by the death of his comrades and friend, put his Curtiss race through it, went, did it, starting before he succeeded in some down. It was a fine exhibition of the indomitable Air Service spirit, but it was more than one more effort and pilot action.

The Pulitzer Trophy and \$5,000 in Liberty Bonds were won by Louis H. H. Miles, who flew his Versell-Sperry (300 hp. Curtiss D-12A) multi-engine monoplane in victory at an average speed of 215.72 mi./hr. This average was about 10 mi. slower than that of last year's contest.

The flight of the Versell-Sperry race was extremely interesting to watch. It was more than that. It is not every day that one sees a plane consisting of nothing but a single wing, a body and tail surface (from the air). For that is all the Versell-Sperry was as light as a feather. Miles, the pilot, had raised the retractable landing gear and the wheels disappeared in the streamers provided in the wings for that purpose. The water returned this manner with the wings angled backward as when the Versell-Sperry and the Low-Low races did it in the Pulitzer race held at Detroit. There is something strangely uncomfortable in watching a plane fold up in landing gear in flight as one sees it in a model table. Fourteen years of aviation position really should make one look with regard to all possible flight maneuvers, but this picture of the whole thing out of sight

it was capable of performing. An unbroken propeller at 2,000 revolutions in the fuselage that the tail surface became practically invisible and the pilot had to look inward right after crossing the starting line.

This trouble was remedied shortly afterwards, the propeller being carefully reinforced. Test flights as well as Lieutenant Miles race fifty here and the expectations of Mr. Versell that the ship would prove very fast as well as maneuverable. In fact, Bird with a metal propeller that more attained a speed in excess of 225 mi./hr. over a shorter course. The propeller was not used in the race, however, owing to the Air Service ruling that all the four Pulitzer races could be filled with identical service propellers.

Lieutenant Brookley on the Curtiss W-8 was a close runner up to Miles, and finished second averaging 214.25 mi./hr., which was about 10 mi. faster than the time made by Louis H. H. Miles on the same ship in the 1923 Pulitzer race. Brookley won \$2,500 in Liberty Bonds.

Louis H. H. Miles of Langley Field was third on the Curtiss PW-8A (400 hp. Curtiss D-12), his average speed for the race being 185.35 mi./hr. He was \$1,500.

Trail Blazers and World Flyers

Louis Oskar O. Ketter and Louis Meeker, two trail blazers, found in reverse before the grandstands. Ketter flew at Dayton from Vanover, E. C., with Meeker as a passenger. They passed over the Oregon trail in 1934. Meeker stated the Oregon trail, years ago, and it took him a couple of weeks the same distance that the airplane covered in slightly more than a half day.

The world then flew to Wilkes Wright from McCook Field, where they had crossed the day before, escorted by the Bar-Big bomber and a squadron of army pursuit ships.

Later the world then passed in review before the grandstands in automobiles. They were greeted the entire length of the course with waving flags.

Plans carried the world then, the winning ships of the John L. Mitchell Trophy race and the Bunting bomber then

went meeting of the Board of Governors of that organization held Sept. 26 at 501 Fifth Ave., New York. Henry M. Crane, President of the Society of Automotive Engineers, was elected First Vice-President. Allen Jackson, Vice-President Standard Oil Company (Indiana), Chicago, Ill., was elected



The Curtiss Parrot plane, model PW-8A (400 hp. Curtiss D-12 high compression engine), which finished third in the Pulitzer Trophy, maintaining an average speed of 187.95 mi./hr.

land, 191 in front of the judge's stand at General Mitchell represented the winner.

The Bombing of New York

The grand finale of the Dayton race was the bombing, by a squadron of Mitchell Bombers, of a model city showing the

First Vice President, J. L. Colfax, President Airways Inc., Birmingham, N. Y., was elected and Vice-President, Thomas M. Farwell, President, Fairchild Aerial Camera Corp., New York, was elected Treasurer; S. S. Biddle, General Manager and Asst. Treasurer; Lester K. Bell, Secretary and Owen A. Hannon, Asst. Secretary.



Pilot who finished first, second and third in the Pulitzer Trophy Race (L. to R.) Louis H. H. Miles, (Versell-Sperry); Louis W. H. Brookley, (Army Curtiss Race); and Louis K. K. Stone (Curtiss Parrot).

two drivers of lower Manhattan. After a smoke screen had been artfully wrapped around the city, the bombers appeared and blew the tall skyscrapers, that reached the height of the cloudy pyramids, to smithereens. And, as everybody out of the Alleghenies went home highly pleased.

A.C.C. Elects Officers and Governors

Charles L. Lawrence, Vice-President of the Wright Aeronautical Corp., Paterson, N. J., was elected President of the International Chamber of Commerce of America at the an-

A new Board of Governors was elected, including the following and also W. C. Young, Co-Editor of The Saturday Evening Post, New York; George C. Lawrence, President of the American Automobile Association, New York; J. O. Vincent, Vice-President, Federal Motor Car Co., Detroit; R. D. Thomas, Thomas Motor Aircraft Corp., Boston, N. Y.; Charles H. Colburn, President, Pioneer Instrument Co., Brooklyn, N. Y.; Donald Douglas, President, The Douglas Company, Santa Monica, Calif.; J. M. Johnson, President, Johnson Aviation & Supply Co., Dayton, Ohio; George P. Tidmarsh, Boeing Airplane Co., Seattle, Wash.

fuel at full engine capacity, and a well thought out air vessel construction. It is often claimed that while American tanks exist in the woods, speed, and distance, American construction and what not, but American tanks are not of the same class. No better indication is possible than these few figures. And so might have selected other ships for the purpose of the same experiment. Fortunately American designers are improving in spite of all difficulties the economy and practicability of their commercial ships.

The Speed Races

If the mail delivery and the task of security in the Pacific were taken at their face value, we might be greatly disappointed. But surely no better additional justification of the Pacific races could exist than the Carrier-Panzer planes—a direct derivative of the Carrier races of last year, and certainly superior in their particular sphere to any other planes in the world.



Map of the Course—Dayton Air Races

The success of the tables by the Versatile-Sperry on the Carrier Race (even though this was a 1922 model) is interesting. Perhaps the mainplane is not quite definitely the superior of the engine for speed purposes. On the other hand, which the Versatile-Sperry might well have, and remembering that its thick mainplane wing also provides an easily enclosed retractable chassis, and remembering also that the advisory possibilities of speed, weight, have not yet been explained in detail here, it is not possible that a main plane might yet be built to beat the best before now in a light.

The race was the second for the second failure in the air of an Army plane. These airplane races are beyond question an extremely sound as this type can be. But it is not possible that the greatest heat of speed has been reached, because the extreme violence of the maneuvers which may be imposed to guide in such races are beyond their climatic capacity.

It is an almost impossible to say what exactly was the cause of the disaster at Dayton. If indeed there was a preposterous, this might well be regarded as a violent one with engine on. The preposterous then comes to be a propulsive one, and becomes an air brake with an automatic torque exerted on the engine, or with an air braking longer. In such a case the engine must race, and so a motor car engine going down a hill, and centrifugal force on an air car very very fast, as in the case of the Indianapolis circuit.

It is indeed May 11. If Schneider of Chicago fans has made the theoretically perfect suggestion that the Pacific race be restricted to cruise containers, now unable to compete with the Army and Navy for financial reasons. This might mean speed races, but would allow the distinction of the Pacific Trophy to be utilized for the improvement of commercial aircraft speeds—while the carriers and manufacturers engaged on service planes could be engaged on gradually increasing Pacific ship speeds to a level with those of the races.

Light Powered Planes

The discussion and analysis of the light powered plane events would surely considerably more than and more than at the disposal of the writer. It is gratifying to see the top implanted in American racing, and a pity that the top is specially designed for light aircraft were not available.

There are one or two points which attract particular consideration by designers. It is not better to give them such a little more power? Surely it is better to increase the wonderful conception of flying at the absolute minimum of power at the absolute, and to secure greater speed and low times of stalling. Hence one of the strongest arguments in favor of the light plane, in its ability to get out of a small field, should not be power and which is necessary to clear obstacles? Were not the outstanding light plane at Dayton singularly disappointing from the point of view of art-work because they were heavily loaded for horsepower and low light in landing per square foot of wing and surface? These planes are undoubtedly likely to fly in greater numbers. Granted that they are very safe as a result, and extremely responsive to control, they would be still of little value as single members were required. A fundamental principle of this point leads to the conclusion that small planes of low loading are actually more stable dynamically than those large, geometrically similar prototypes. But in many studies, very stable planes are developed, and they are not so stable as the stable ones. An oscillation is more rapidly damped out in a very stable plane, but the actual effect of a gust may be more violent. The correct theoretical solution is to make the machines very slightly stable statically and to provide relatively enormous damping. In other words to make both longitudinal and lateral damped out, or even to make lateral damped out, and to provide very lighter lateral damping of wing of very little upper surface. Designer of the Johnson-Dornier plane confirm this view from a practical standpoint, and from the reports of the pilot flying this particular oval. It is, however, a very small one, and the very aspect of mathematics and practice is worth consideration.

Two New Fairchild Subsidiaries

Continued expansion of the aerial service business of the Fairchild Aerial Cruisers Corps, has led to the formation of two subsidiary companies. The first, to be known as Fairchild Aerial Airways, Inc., will handle the aerial service branch of the business, while the other, the Aerial Flying



Light Passenger Cabin Waco, with Liberty 6 engine—A Dayton visitor

Corps, will direct operations involving contracts for fixed air service, and will also operate the airplanes for such used by the general public. The new subsidiaries become operating Sept. 1.

Fairchild Aerial Airways Corp. will continue to manufacture commercial, recreational and aeronautical equipment and will continue to be a subsidiary of Fairchild Aircraft Corp., Inc., of Fairchild Aerial Airways, Ltd., of Canada.

"Speed and Efficiency"

The Light Plane Events and Entries

By E. T. ALLEN

Mr. Dayton. Races are over. The 203 hp. single motor we have made more speed, the standard 203 hp. have completed their annual rounds, and the great number has moved to, every way around the field.

As a result of the races, the great commercial class, were scheduled two events for light planes, the first, open number 1 at the Dayton Air Races, a 25 mi. speed and climb race for the Dayton Daily News Trophy, and the second, a speed and climb race of 25 mi. for the Dayton Daily News Trophy and the Dayton Daily News Trophy.

Activities on Thursday

There were many light planes entered for these events, as far as the air, and these finished the course. The weather, however, if, in spite of the slight tendency to depression on the part of the officials, the average man who was the most one behind the fence, will not remember them, any other day than the light planes, and will not take account of the most year on that can be seen. There was, perhaps, the usual mixture of light planes as a result.

On the first day of the race, the light plane events were scheduled, and the events were very successful, and the weather was very good. The most last minute completion was in the 25 mi. race, and it seemed quite certain that at least two of the most were to be seen. The mixture of Mr. Waco, and the Waco engine, seemed to be suffering with the standard difficulty—engines. The Shell-Dated light plane with the last shell engine engine in still awaiting either a new engine, or a new engine to be seen. The mixture of Mr. Waco, and the Waco engine, seemed to be suffering with the standard difficulty—engines. The Shell-Dated light plane with the last shell engine engine in still awaiting either a new engine, or a new engine to be seen. The mixture of Mr. Waco, and the Waco engine, seemed to be suffering with the standard difficulty—engines. The Shell-Dated light plane with the last shell engine engine in still awaiting either a new engine, or a new engine to be seen.

Dayton Daily News Race

On Friday, things looked better. Since before the Dayton Daily News race, all was ready with at least six machines. The Shell-Dated light plane was not entered in this race, as Mr. Waco, and the Waco engine, seemed to be suffering with the standard difficulty—engines. The Shell-Dated light plane with the last shell engine engine in still awaiting either a new engine, or a new engine to be seen.

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leading on very bad ground put an end to the hopes of Snyder, who has had his little ship ready for a race since 1920. Monahan's Harley-Davidson speed quad gave for the first two laps, but then he landed with motor trouble.

Johnson Wins

Monahan easily won the race, with Dornier second. The larger of the others were not in the race scheduled for the first day. In the afternoon, the subject of larger engines for light planes came up to prohibit their victory. There was no argument in which it was held on one side that the results of this race were proof positive of the need of engines of larger displacement than the 203 hp. engine. Monahan declared that his light plane—an first light plane that was so far as all concerned, would have an engine of 180 hp. in displacement. One of the light plane incidents held that this was not a light plane at all. These men, he said, undoubtedly a field for the type of plane equipped with the 200 hp. in engines, but there was also, he held, the possibility of developing more thoroughly the light plane. One of our English guests had to be told, nothing but continued light plane in general, although it was pointed out that he writes as a former aeronautical journal that the nature of commercial aviation depends upon the development of the 18 hp. per passenger airplane, a figure he pointed to and proved possible by the Lygic light plane performance.

Altogether the light planes seemed more representative than any other plane at the meeting, except among those for whom these races had been organized.

First Light Plane Event

On the first day, we scheduled a "speed and efficiency" race for light planes. Six cars lined up ready for the starters gun, the seventh being pushed off the day before. Johnson, Dornier, and Monahan, got off as before as the three machines. Johnson's car, which was in a heavy air, and the flying the Flying-Turner biplane did not get on its feet, and the speed was very poor.

Johnson's first lap was recorded at an average of 30 mi. per hour. Dornier's car, which was at 30, and Monahan, which was at 30, on the second lap, however, Johnson made a forced landing on account of a stoppage in the gas line. He was reported by the announcer as repairing the difficulty and making ready for the second attempt. His car, which was in a heavy air, and the flying the Flying-Turner biplane did not get on its feet, and the speed was very poor. Johnson's first lap was recorded at an average of 30 mi. per hour. Dornier's car, which was at 30, and Monahan, which was at 30, on the second lap, however, Johnson made a forced landing on account of a stoppage in the gas line. He was reported by the announcer as repairing the difficulty and making ready for the second attempt. His car, which was in a heavy air, and the flying the Flying-Turner biplane did not get on its feet, and the speed was very poor.

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of the rear there was not a place in the air! Dumorey as planned when it was reached that it was too lumpy—he would wait until later to think. It was fearfully rough.

But that happens even as we see Mummert take off again. And the last high as he goes with an great cry as a Yeager. When he completed the course and was announced winner of the first prize we were all very happy. Dumorey came in a close second, and Dumorey was given three points which he needed to complete the race on account of the imminent failure event.



Driggs-Johnson Light Plane, Locomotive which was first place in the Dayton Daily News Trophy Race

The unfortunate experience of the other contestants with external engine failure was very disappointing, especially since one had had the same experience and still, and had expected at length in those moments on the death of good light plane engines. It was too bad that the engine had not made the race as that we might have had a comparison with the performance of the monoplane. Two of the engines were quite new sport jobs, one had a bad, one from, very well. If there had been experience on the part of engine builders, the race would have been a far greater success.

Mr. Dumorey, who is, by the way, one of the McCook Field designers, and he felt that 60 m. it was not enough engine displacement for a light plane engine. He said on landing after the flight from McCook Field, "anyone who advocates a lower limit on cylinder displacement ought to be condemned to fly on a biplane or triplane." One of the other aviators nearby asked, "But aren't the British building two-seater with much less displacement? How do they get away with it?" Mr. Dumorey Johnson was asked how he liked to fly inside a cabin. He said that he had thought at first he would not like it at all. "That is great," he said. When asked if he would still want such a machine of his this time, he replied that they were already working some orders and expected to build as many as were wanted.

The Mummert sport light plane, is one understated, also is the market. It would, with a more satisfactory motor, be a very fine little sport plane.

The Machines Themselves

The first light plane entered in these events was the Driggs-Johnson "Locomotive" equipped with a four-cylinder air cooled Johnson motor of 50 h. p. displacement. Mr. Driggs, the designer, was formerly with the Dayton-Wright Co., and has recently joined the Johnson organization at Dayton. He has just put out one of the most little jobs that has ever been made in the light, and the workmanship and finish, done in the Johnson shops, are quite equal to the finest steel. The little ship is a monoplane of very high speed ratio. Although Mr. Driggs declares he does not believe in high speed ratio or small chord for light planes, but only in low weight per foot of span, this machine has the highest aspect ratio and narrowest chord of any monoplane airplane now known in this country. The span is 27 ft., the chord is 15 in., giving a 9:1 ratio. The wing is of one piece, raised about a foot above the fuselage, with the space between the wing and fuselage beautifully covered in by ribbed windows, this space forming the head room of the cockpit. The cockpit is in the rear of the wing, and is removed at this point to add to the cabin comfort, and the top surface is formed of a large ribbed window. Ribbed pilot's cockpit are not generally popular among pilots, but

one believes that perhaps this little ship will prove the exception. At least no hint of poor vision can ever be made. The pilot's view is entirely unobstructed all around, in front, behind, and above. The fuselage is covered in at the nose as usually is in some of the motors. Behind the "motor" the fuselage becomes triangular in cross section, with the apex at the top. The four cylinder motor is completely covered on. An opening is provided for by built plates and air ducts which conduct an equal volume of air to all the cylinders. An air duct underneath the wing leads to the air.

Forward structure consists of steel tubing. The two upper legs meet in a single immediately back of the motor to the single side of the top of the rear portion. The triangular section is curved back to the fuselage. The fuselage is of welded steel plate construction. They are thin, extremely light plates, of quite small but quite solid sections.

The engine is mounted directly on steel tube is even built out from the body in the conventional manner. A door in the side under the wing gives access to the motor, and which is directly back of the engine. The first ribber bar is under the rear end of the engine block.

A steel iron framework of steel tubes, entirely absent within the motor, surrounds the fuselage with the wing, which is of the two box type construction with the open structure across the top of the cockpit. The wing is a new U.S.A. section, the No. 45, which looks very much like some of the Clark section except that it has a slight under camber. It is centered forward of the rear spar with three ply lead center, giving a perfect wing surface and providing between having the wing tapered from a 4 ft. chord at the outer periphery to a 3 ft. chord over the top. Elliptical wing tips provide a beautiful finish, give in the wing an extra lift by free tip section, and, more important still, an extraordinary performance. Its maximum L/D must be higher than any recorded for such wing shape.

The landing gear consists of two Palmer 55 x 4 wheels on a straight axle which operates in a slot in a single side strut. There is no separate compression member other than the axle, across the wheels. Disposal wires are attached to the fitting over the shock absorber struts, and additional wires later the landing gear strut fore and aft.

The weight absolute is 325 lb. empty and 610 lb. gross, giving a power loading of something in the neighborhood of



Mummert Light Plane which won the Speed and Efficiency Contest for Light Planes

23 lb. per horsepower. The wing loading is 6.6 lb. per sq. ft. Some difficulty was experienced with the motor, especially when the three-seater people offered no cooperation when in the project. A standard model was used, the only change being that required for providing a propeller hub. Transmission and flywheel were removed, and a thrust bearing added in the old flywheel flange. The propeller shaft is bolted to the flange and a front plate of cast aluminum is bolted to the machine. The way in which the motor was cooled in and model was far more interesting than the motor itself, which was capable of being somewhat increased. Its weight is over 6 lb. per hp., and its noise effective pressure about half that of a good air cooled engine. But it was, and that very well—which is one of the most all important things for a light plane motor to do. On the whole, the Driggs-Johnson combination have produced what is, perhaps, the only airplane ship in this year's race, with the possible exception of the Stout "Palladium." The little "Locomotive" is clean, air, and

dearly arranged and constructed, and, what, one believes, is a joy to fly, as it is to watch.

The second light plane on the program also contained a few interesting features. In fact, the engine seemed to be the major part of the machine. The plane was designed and built by Mr. Dumorey of the Engineering Division of the Air Service. It was planned with the aim in view of extreme simplicity and cheapness of construction. And it may well be said that that end is attained. Mr. Dumorey's personal airplane was nicknamed "the hotbird" after its first flight as a result of the tiny needle which hums engine and pilot in with close proximity under the wing. Steel tubes had been used and the taking wing struts seemed one of earlier days of light construction.

The Dumorey machine weighs 435 lb. gross, of which 135 lb. is motor weight. 32.5 per cent engine weight. All up, 41 sq. ft. of wing surface are used, with a span of 24 ft., giving an aspect ratio of 4. An expansion landing gear is designed to keep in construction of both the body and the wing structure. The axle is hinged in the middle to the lower member of the body. Another member runs from the shock absorber

to the wing fitting. The entire framework except the wing itself is of welded steel tubing.

Mr. Dumorey flew this little plane last from light plane at McCook Field before the race, in view of the flight being 2 hr. And then the machine was flown from McCook Field to Wilbur Wright Field on the morning of the race. The motor runs at 2800 rpm, and seems to run satisfactorily at that speed. It has in this machine been last entirely reworked except for one air scoop on the exhaust side. In the last run, the climb and speed after a run was very good, coming in for second place on the 25 m. course. On the following day, in the speed and efficiency race, Mr. Dumorey flew high and seemed to feel quite confident, although the air was very lumpy, and the light plane was tossed about like a small boat at sea. After several laps, however, he landed, saying it was too rough to fly. The striking feature of this machine is the cheapness of construction. One computes that if the constructor were offered \$500 apiece for two of them, he would build them in a very short time, and with the profit take a pleasant vacation from McCook Field worries.

(To be continued)

Navy-Curtiss Racer Averages 227.5 Miles Per Hour

The contest with the U. S. Navy the Curtiss representing was decided in rebelling the Navy Cup. The Curtiss, a biplane of 1923, has a monoplane for the defense of the Schneider Cup, which was brought to America through the placement of Lord D'Almeida at Cowes, Sept. 28, 1926, in the Navy-Curtiss race.

Amazingly this wonderful 350 machine was taken out of

the hangars of the Curtiss Trans-Design Company at Fort Washington, Pa., where the machine was standing by. Without any preliminary testing, he took the plane into the air for a thirty-minute flight, demonstrating the remarkable speed of 227.5 m.p.h. When it is realized that last year's record was set by a biplane, and that this year's machine is a monoplane, the high speed of this machine is truly a record.



Navy-Curtiss biplane redesigned by the Curtiss Co., from last year's Pulitzer Race winner, to defend the Schneider Cup

storage, the engineering time under which it was reconstructed. The machine was completely overhauled, preparatory to the reconstruction of a last place into a monoplane high speed machine with the Curtiss D-12A 500 hp. engine. It was found possible to fit a new propeller into the landing gear without objection of either the fuselage or the wing. Larger main engines were shown to be necessary through wind tunnel testing of the model and these were added.

On October, Sept. 27, Lieutenant Williamson arrived at

was finished and was simply made in accordance with the constructor's guarantee.

At the foreign challenges for the Schneider Cup have withdrawn their entries, this machine may be left to defend the Cup at another time. While many persons, enthusiastic are anxious to see the plane flown at Hahnemann during the next meet there must, as November, the Bureau of Aeronautics has not yet decided whether a demonstration at that time can be arranged.

rough water the glass took off without difficulty after removing the gauges.

One squadron each of the type, the Douglas torpedo planes form a part of the aircraft assignment of the Southern Fleet, the Pacific Fleet and the Atlantic Fleet. The southern division of these planes have remained during the past two years has acted as a base to further development along the same line. The result of this development is shown in the complete knowledge of the CBO, which recently broke all the world's records for airplane endurance in the air and distance flown, as well as the world's second records for airplanes over distances of 500 mi. and over.

While the DT-2 type is regarded primarily as a torpedo launching plane, it possesses unusual qualities for long range bombing and bombing. This is reflected in the CBO which has been developed from it and is known as a "true purpose" type for the three stages mentioned above.

Navy Ready for ZB3

A torpedo plane is being sought by the Naval Air Service for the ZB3, which is built largely which is expected to be for the Navy's use. The ZB3 is built largely which is expected to be for the Navy's use.

also airplanes meeting Daughter of the Stars. It is hoped to let upon a base for the new air service carrying on the same idea.

The new developments necessary to remove the ZB3 already are under way. Trained pilots have been sent to World Field, Boston Air Port, Langley Field and Fort Belvoir to serve as emergency ground crews should unforeseen weather prevent landing at Langley.

The three ships selected for service observation of the North Atlantic have received orders to take their stations. They are the mining ship *Patuxet*, station ship, *Thetis*, observation ship, and *Albatross*, relay ship.

Naval Air Orders

Lieut. James J. Connel, Det. Div. of Aeron. Navy Dept., to Arrived, Wash., D.C.
Lieut. Charles C. Connel, Det. Div. of Aeron. Navy Dept., to Arrived, Wash., D.C.
Lieut. Charles C. Connel, Det. Div. of Aeron. Navy Dept., to Arrived, Wash., D.C.
Lieut. Charles C. Connel, Det. Div. of Aeron. Navy Dept., to Arrived, Wash., D.C.

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Curtis Exhibit Company, Garden City, N. Y.
Curtis Exhibit Company, Garden City, N. Y.

NEW YORK

FORD WASHINGTON, LYING BEARD
FLYING BOAT SCHOOL
Chief Instructor—Instructor
Chief Instructor—Instructor

NEW YORK

AKRON CLEVELAND
Flying School for students in Akron, Ohio
Flying School for students in Akron, Ohio

NEW YORK

DAYTON, OHIO
Barnes, Hargis, Boyd and Ford, 1 Mile from Dayton, Ohio
Barnes, Hargis, Boyd and Ford, 1 Mile from Dayton, Ohio

NEW YORK

ESSINGTON SCHOOL OF AVIATION
Essington School of Aviation
Essington School of Aviation

NEW YORK

THE SKYWAY CORPORATION
Bicycle & Day Aircraft, Bicycles, Bicycles
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Publisher's News Letter

The fact opportunity that AVIATION has had in a long time to present Dutton and its companion in a series of the planning side of the Dayton Model. The most recently planned, most rapid and best. Money was spent in preparation with a freedom that was startling to some of the veterans. Any shortcomings, and there were many, can be attributed largely to causes over which the local committee had little or no control. It is a genuine pleasure to compliment the public spirited citizens who aided for the race, having in mind an effort of international interest, and also to extend to them the greatest sympathy for the continuous series of circumstances that prevented the fulfillment of their hopes.

The despatch board that went up from visitors about the special field points was the biggest source of the most. Without one word he was met with the indignant protests over the obstacles put in the way of those who came to see technical progress and were only permitted to view the ships at a distance—and that a very great distance. Never before has such an iron hand been applied before the aeronautical community with the determination "These ships don't pass." There can be no course for such methods especially as the field was the largest ever available for races. Army officers in uniform, officials of the N.A.A., distinguished scientists, representatives of large aeronautical companies, all were treated alike. Only a very small group, of which we were a part, were allowed access to all parts of the enclosure. Already the newly formed Genetec Committee of the N.A.A. is considering the situation.

The field management was superb. Coleb Roney and Howard Wehrle ran the races with skill, but only came from long experience. Wehrle seemed to be every place where a starter should be. He is becoming as much a fixture in American aviation as Fred Wagner is in the automobile world. Russell Shaw, who was completely won over all sides for the radio efficiency with which he had supervised the preparations for the Meet and handled the Contest Committee. In fact it was agreed by everyone that Shaw and Wehrle had reached a point of perfection where they could be entrusted with the entire field arrangements of any race with complete confidence. Of course the money arrangements, the course and the incident could not be improved. The

cost to the government must have been very great. It can even be questioned as to whether the results justified the expense.

The general feeling prevailed that this should be the last meet held on an Army field and under Army domination. The pilots from "Heli's Half Hour" were again, as at St. Louis, considered as a side show to be kept away from the main track. Rank and prominence in other lines seemed to be the one consideration for advancement in the chosen course. There is a very pronounced leaning to a new meet next year at which commercial aircraft will participate, both in events and money. If the N.A.A. wants to encourage the brightest hope of American aviation it will make next year's meet revolve about the development of commercial aviation. American records can be obtained by Army means, should foreign planes come, but one of the best ways of stimulating interest in the future would be to have the Government take the money it spends on these races and offer said prize to the aeronautical industry for the construction of fast ships. It has been very convenient to lean on the Army, Navy and Air Force for race values but with the two latter continuing their efforts to their own specialities, the Army Air Service could well afford to try to stimulate the building of speed craft rather than attempting to do the whole thing itself.

For the civilian aircraft nothing but praise can be given. The steady progress in the last two years in changing up design and construction by the occupants of "Heli's Half Hour" or what Schneider called "the chicken patch," was the topic most discussed by the visitors who were more interested in aviation progress than in aerial circus stunts. The offering of such large prizes for modern races is a waste of money.

The light plane and the model contests interested those who had specialized in these aeronautical toys and miniature aircraft. The boys did establish a new world's record but the light plane performance was not so convincing. The complete lack of interest and cooperation by the motorcycle engine makers made the failures of the engines no less frequent. As a possible commercial development it is difficult to endorse even the results of the first appearance of the light plane. They may come along later, now that the start has been made.

A Suggested National Air Policy

That a National Aviation Policy is needed by the United States is obvious. To get such a policy in concrete form AVIATION requested several thoughtful friends of aeronautical progress to make suggestive and constructive recommendations. Some of them are given below and will be printed each week with additions, omissions and such other changes as appear to be helpful toward the formulation of a sound national air policy. Readers of AVIATION and others can render no greater service to the cause of aeronautical progress than contributing their comments and suggestions.

GOVERNMENTAL.

A continuing program of aircraft development both governmental and commercial. A civilian, directed and supervised, national air policy, in accord with the Government. "Cabotage" Aircraft operations in the House and Senate to build aircraft bearings where airlines as well as government officials can express their opinions. "Comparative of fleets."

A detailed aircraft budget for all Governmental Departments, and an annual statement of all expenditures.

An experienced staff of flying officers at the head of all governmental air defense services.

Coordination of all governmental and experimental aircraft work of the government under one agency.

Re-consideration of the aircraft experimental development of the government leaving procurement to the various branches themselves.

Limitation of government manufacture to repair of aircraft and specialized work that cannot be done by private firms. "No limitations on experimental construction."

The elimination of the duplication of aerial furnishings and facilities by government departments.

A country wide Air Mail system of trunk lines connecting the principal cities of the country. "Reference law for air mail pilots."

Establishment of a National Airway System through cooperation of the Federal Government with States and Cities. "A landing field in every large city."

A national aircraft law that will regulate aviation, administered by practical pilots and experienced aeronautical engineers. "And federal air police."

Membership of the United States in the International Convention for Air Navigation.

"Personnel governmental appropriations for aerial development."

"Encouragement of aviation rather than subsidy."

COMMERCIAL AIRCRAFT OPERATION.

Cancellation of commercial air lines by private enterprise or government subsidy.

Encouragement of participation by private companies in aircraft races and competitions.

Encouragement of the training of pilots by civilian schools.

Creating an Expert Corps among flying men all over the country by frequent gatherings at aviation meets.

"Encouragement of safe and sure flying."

"A continuing organization, including representatives of all important points of view in aeronautics, for the discussion of standards for aeronautics where standardization is desirable."

INDUSTRIAL AIRCRAFT CONSTRUCTION.

Recognition that a sound aeronautical industry is a prime necessity of our National Defense.

An active industrial association that will coordinate the aircraft industry and defend it from attack.

Encouragement of the designing of new types of aircraft by manufacturers by allowing them to retain their proprietary rights.

Concentration of manufacturing firms on specialized types of army and navy aircraft. "When production demands are heavy."

Encouragement of research by contractors, universities and other agencies as well as by the government.

Encouragement of an annual design competition for commercial aircraft.

CIVILIAN.

A national aeronautical organization composed of public spirited citizens that will take a strong position of leadership on national aeronautical policy. "Inclusion of all aeronautical organizations into one national association with chapters in all cities and towns."

An Annual Aviation Week during which the country will think of aerial progress. "52 such weeks."

The formation of local aero clubs by firms for the purpose of stimulating flying in all localities.

Encouraging the public to fly and patronize the air mail and transport facilities.

"The encouragement of gliding and soaring sports, especially motorless."

"Suggested changes."

THE Aircraft Service Directory

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—Super Performance in the 3 Seat Class—
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Information Wanted on Barker Sport Plane. The Huber
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